Name: \_\_GOOD EXAMPLE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| *Copper Plumbing* | Topics | *Plastic Plumbing* |
| **Production cost**: $1560/ton  **Consumer cost**: $0.90 per foot | Cost   * cost to extract/ harvest natural material OR cost to produce synthetic * cost to consumer | **Production cost**: $1171.50/ton  **Consumer cost**: $0.30 per foot |
| http://www.princeton.edu/~ota/disk2/1988/8808/880811.PDF | ←Resources→ | http://www.pvc.org/en/faqs/9 |
| **Benefits:**   * Less prone to growing bacteria   **Hazards:**   * Causes onset and acceleration of Alzheimer’s Disease * Copper doesn’t cause cancer but can accelerate the growth of tumors. * Gastrointestinal complaints (abdominal pain, cramps, nausea, diarrhea, vomiting), Liver damage, Schizophrenia, Hypertension, Stuttering, Fatigue, Headaches, Muscle and joint pain, Autism, Childhood hyperactivity, Depression, Insomnia, Senility, Premenstrual syndrome | Human health   * health hazards * health benefits | **Benefits:**   * None   **Hazards**   * More prone to growing bacteria * Builds up in the tissues of living things. * Cross the placenta easily and concentrate in the breast milk of humans and other mammals. * Have been shown to cause: Cancer, disruption of the endocrine system, reproductive impairment, Impaired child development and birth defects, damage to the brain or its function, and immune system suppression. * Workers and communities are exposed to toxic substances during PVC production |
| http://articles.mercola.com/sites/articles/archive/2010/02/11/copper-pipes-in-your-home-may-cause-heart-disease-and-alzheimers.aspx | ←Resources→ | http://www.pvc.org/en/faqs/9 |
| **Mining:**   * High water usage during mineral processing reduces water levels and fresh inflows. The reduction of water levels effect both wildlife and domestic usage. * Water can be contaminated by drilling, blasting, pits, and waste * 80 to 90 percent of the original rock moved becomes waste * Mining may lead to erosion and the localized destruction of river banks.   **Processing:**   * Mineral processing releases large quantities of toxic air particles and gases. Airborne toxins can harm both workers and citizens located at distant locations from the mine | Environmental impact   * impact on ecosystems (plants, animals, and/or earth) * during harvesting, recycling, disposal | **Production**:   * Oil is a non- renewable resource. * PVC production is the largest use of chlorine gas in the world--approximately 16 million tons per year worldwide. * One million tons per year of chlorine-rich hazardous wastes are generated in the synthesis of ethylene dichloride and vinyl chloride monomer. * VCM production facilities are major polluters * Chlorine production consumes enormous amounts of energy * Chlorine production causes mercury pollution |
| http://academics.uww.edu/cni/webquest/Fall03/mine/penny2.htm | ←Resources→ | http://www.healthybuilding.net/pvc/ThorntonPVCSummary.html |
| * the average life of a copper pipe, per engineering specifications, is about 20 years * Water with pH below 6.5 can cause pitting and pinhole leaks * World production of copper amounts to 12 million tons a year and about 2 million tons a year are recycled. | Durability/life span   * how strong is it * how long will it last * is it recyclable | * Life span of 115 yrs * Prone to bursting if frozen * PVC is extremely difficult to recycle. Less than 3 percent of post-consumer PVC is recycled. |
| http://articles.mercola.com/sites/articles/archive/2010/02/11/copper-pipes-in-your-home-may-cause-heart-disease-and-alzheimers.aspx  http://www.lenntech.com/periodic/elements/cu.htm | ←Resources→ | http://www.pvc.org/en/p/pvcs-physical-properties |